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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/822,324	04/12/2004	Thomas Zelenka	N81740/LPK	2572
1333	7590	06/05/2006	EXAMINER	
PATENT LEGAL STAFF EASTMAN KODAK COMPANY 343 STATE STREET ROCHESTER, NY 14650-2201			DETSCHER, MARISSA	
			ART UNIT	PAPER NUMBER
			2877	

DATE MAILED: 06/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/822,324

Applicant(s)

ZELENKA ET AL.

Examiner

Marissa J. Detschel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/12/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 103 17 447.8, filed on April 16, 2003, in Germany.

Information Disclosure Statement

The information disclosure statement filed on April 12, 2004, has been fully considered by the Examiner.

Drawings

The drawings are objected to under 37 CFR 1.83(a) because the blank boxes (elements 10 and 13 of Figure 2 and elements 10, 16, and 17 of Figure 3) should have a descriptive label. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Examiner suggests making element 10 read "Allocation Table", element 13 read "Multiplication Element", element 16 read "Computer", and element 17 read "Readout Device"

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claims 3, 4, and 9 are objected to because of the following informalities:

As to claim 3, line 1, the phrase "wherein emitted light is" should read "wherein said emitted light is"

As to claim 4, line 1, the limitation "the intensity" is included in this claim, and there is insufficient antecedent basis for this. Examiner suggests changing this to "an intensity"

As to claim 9, lines 1-2, the phrase "said receivers has multiple outputs" should read "wherein said receivers have multiple outputs"

As to claim 9, line 3, the limitation "the luminous intensity" is included in this claim, and there is insufficient antecedent basis for this. Examiner suggests changing this to "a luminous intensity"

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Jung et al. (USPN 6,301,004).

Regarding claim 1, Jung discloses a procedure for detecting various colors on a surface comprising the steps of:

Detecting at least one color on a surface;

Detecting the distance between a color sensor device and surface;

And determining the proper color value of the surface, depending on the distance of the surface from the sensor device.

Jung discloses a sensor device embodiment that utilizes a series of receivers in the form of a triad of sensors (312-320) spaced out in rings around a light source (310) (Figure 16). Due to the sensor arrangement, the light intensities measured by the receivers will vary as the probe is moved closer to the surface or away from the surface, and, therefore, the rings of the sensors will peak at different critical heights. By analyzing the variation in light values received by the triads of sensors, the height of the probe can be determined. Therefore, this sensor device determines the distance between the sensor device and the surface.

The sensor device of Jung is calibrated against a neutral background and the calibration values are stored in a memory in the form of a RAM look-up table before any measurements are made of the height of the probe from the surface being measured. When the height of the probe from the surface is being measured, the variance in light intensity is analyzed and compared to the values of the calibrated look-up table to determine the height of the probe. This height of the probe measured after calibration of the device represents a change in distance of the sensor device from the surface. After this measurement is taken and compared, the determined height of the probe from the measurement and comparison is used to compensate for light intensities measured by the color sensors. This compensation represents a correction value (claim 5) (column 24, lines 7-64)

Regarding claim 2, the procedure of Jung further comprises:

Having the sensor device emit white light to the surface;

Reflecting light from the surface;

And spectrally splitting such reflected light by a filter prior to being received by the sensor receiver.

Jung discloses that a method of quantifying a color to an object is by illuminating an object with white light and measuring the intensity of the reflected light after it has been passed through red, green, and blue filters to provide tristimulus light values representative of the color of the surface (column 1, lines 57-62). The color receivers of

Jung are coupled to suitable tristimulus filters such as red, green, and blue. (column 19, lines 3-9) Therefore, the reflected light from the surface is spectrally split prior to being received by the light sensor receiver.

In regards to claim 3, Jung discloses that the emitted light can be temporally sequential light with at least three different spectral properties. Jung discloses that another method of quantifying a color of an object is to illuminate the object with three mono-chromatic light sources (i.e. red, green, and blue), one at a time, and to measure the intensity of the reflected light (column 1, lines 62-66). The light sources have at least three different spectral properties and the light is emitted one at a time, indicating a temporal sequence.

In regards to claim 4, the procedure of Jung includes altering the intensity of the light emitted to the surface according to a correction value dependent on the distance of the surface from the sensor device. Jung discloses that non-perpendicular surfaces being inspected can be compensated for by mathematically adjusting the light intensity measurements of the color sensors. (column 24, lines 3-6) The intensity of the light dependent on the distance of the surface from the sensor device is altered to compensate for varying distances over the surface, which are directly related to the distance of the surface from the sensor device.

Regarding claim 5, the procedure of Jung includes determining correction values for the color values from the determined distance between surface and sensor device, as disclosed above.

In regards to claim 6, Jung discloses a sensor device for detecting various colors at a surface, comprising:

at least one sensor receiver for determination of a change in distance of the sensor device from the surface.

In regards to claim 7, the sensor device of Jung further includes a distance sensor for determination of the distance between the sensor device and the surface.

Regarding claims 6 and 7, Jung discloses a sensor device embodiment that utilizes a series of receivers in the form of a triad of sensors (312-320) spaced out in rings around a light source (310) (Figure 16). Due to the sensor arrangement, the light intensities measured by the receivers will vary as the probe is moved closer to the surface or away from the surface, and, therefore, the rings of the sensors will peak at different critical heights. By analyzing the variation in light values received by the triads of sensors, the height of the probe can be determined. Therefore, this sensor device determines the distance between the sensor device and the surface.

The sensor device of Jung is calibrated against a neutral background and the calibration values are stored in a memory in the form of a RAM look-up table before any measurements are made of the height of the probe from the surface being measured. When the height of the probe from the surface is being measured, the variance in light intensity is analyzed and compared to the values of the calibrated look-up table to determine the height of the probe. This height of the probe measured after calibration of

the device represents a change in distance of the sensor device from the surface.

(column 24, lines 7-60)

In regards to claim 8, the sensor device of Jung includes an allocation table for allocation of correction values to distances detected by the sensor device. After this measurement is taken and compared, the determined height of the probe from the measurement and comparison is used to compensate for light intensities measured by the color sensors. This compensation represents a correction value, and the look-up table of the determined heights from the calibration procedure represents an allocation table. (column 24, lines 60-64)

Regarding claim 9, the receivers of Jung have multiple outputs, whose output signals are evaluated simultaneously with the determination of a luminous intensity and the distance between the surface and the sensor device. The receivers (312-320) have multiple outputs (one output per receiver) and the signals are evaluated with the determination of the intensity at a distance between the surface and the sensor device, as disclosed above.

Regarding claim 10, the sensor device of Jung includes a light source for emitting light to the surface for reflection therefrom, and a filter for spectrally splitting the reflected light prior to being received by said at least one sensor receiver. Jung discloses that a method of quantifying a color to an object is by illuminating an object with white light and measuring the intensity of the reflected light after it has been passed through red, green, and blue filters to provide tristimulus light values representative of the color of the surface (column 1, lines 57-62). The color receivers of Jung are coupled

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to suitable tristimulus filters such as red, green, and blue. (column 19, lines 3-9)

Therefore, the reflected light from the surface is spectrally split prior to being received by the light sensor receiver.

Regarding claim 11, the light source of Jung includes a device for controlled alteration of its luminous intensity, depending on the distance of the surface from the sensor device. Jung discloses that non-perpendicular surfaces being inspected can be compensated for by mathematically adjusting the light intensity measurements of the color sensors. (column 24, lines 3-6) The intensity of the light dependent on the distance of the surface from the sensor device is altered to compensate for varying distances over the surface, which are directly related to the distances of the surface from the sensor device.

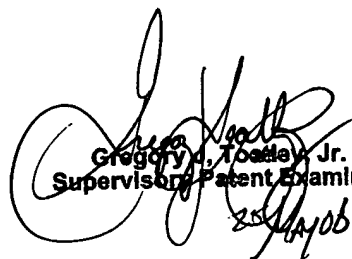
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marissa J. Detschel whose telephone number is 571-272-2716. The examiner can normally be reached on M-F 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on 571-272-2059. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Marissa J. Detschel
May 24, 2006
MJD


Gregory D. Tooley Jr.
Supervising Patent Examiner
25 May 06